WSDOT Aviation’s Airport Mapping Application

Lynn Peterson  
Secretary of Transportation

Steve Reinmuth  
Chief of Staff

Brian Smith  
Strategic Planning Division Director

Tris Atkins  
Aviation Director

Alan Smith  
GIS Branch Manager  
GIS and Roadway Data Office WSDOT

Carter Timmerman  
Aviation Planner / GIS Analyst  
WSDOT Aviation
WSDOT Aviation Division

Motto

“A Steward for Washington’s Aviation System”

Mission Statement
To enhance Washington State’s aviation system interests in ways that strengthen our transportation system, economy and quality of life.

Vision
To be a leader in aviation system planning and innovation.
Growth Management Act (GMA)

• Towns, cities and counties must discourage incompatible land uses (RCW 36.70.547, 36.70A.51)

• Towns, cities and counties must consult with aviation interests (RCW 36.70.547, 36.70A.510)

• WSDOT Aviation must provide technical assistance (RCW 36.70.547)
What is Incompatible? High Intensity/ Special Function Land Uses
What is Incompatible? Height Hazards
What is Incompatible? Residential Encroachment

Anacortes Airport 34 year
**Goal**: Promote Informed Decision Making Through the Proliferation of Airport Information

- Airport managers
- Planning Commissions
- Elected Officials
- Engineers
- Long-range Planners
- Current Planners
Airport Map Application Project
3 Projects in 1

Interactive Airport Mapping

FAR 77 Airspace Calculator

Integration With WSDOT’s A.I.S.
An airport layout plan is a set of drawings that represent the current and anticipated airport facility, typically drafted in AutoCAD.
Airport Mapping Application

Interactive Online Mapping Application

Paper Drawing Set
GeoPortal Mapping Application

GRDO Map Application

Map Controls

Layers  Legend  Tools  Base map

Imagery  Imagery with Labels
Topographic  USA Topo Maps
OpenStreetMap  Terrain
Terrain with Labels  Shaded Relief
WSDOT Basemap  Functional Class

Washington State Department of Transportation
Base Features and Tools

Basic Features
- City Limits
- Congressional Districts
- County Boundaries
- Legislative Districts
- MPO
- RTPO
- Township / Section
- Tribal Lands

Tools
- Lat / Long Locator
- Allows User to Zoom to Specific Locations:
  - Airports
  - Address
  - Counties
  - Cities
  - Urban Areas
  - Mileposts
Populating the Application

**Existing Data:**
- Runway (Surface)
- Runway Centerline
- Helipad
- Runway Threshold
- Runway Numbers
- Windsock
- Segmented Circle
- Building Footprints
- Hold Lines
- Taxiway
- Apron
- RPZ
- Object Free Area
- Object Free Area Taxiway
- Airport Reference Point
- Airport Property Boundary

*Felt Field CAD in GIS*
Airport Map Application

http://www.wsdot.wa.gov/data/tools/geoportal/?config=airport
Airport Map App
Airspace Features & Calculator
ESRI’s Aeronautical Solution

FAA FAR 77

Runway Classification

The runway classification of the Input Runway Feature Class (input_feature_class).

- Utility visual approach—A runway built for propeller aircraft not exceeding 12,500 pounds gross weight. Aircraft using the runway employ visual approach procedures.
- Utility nonprecision instrument approach—A runway built for propeller aircraft not exceeding 12,500 pounds gross weight. Runway has an instrument approach procedure that uses air navigation facilities with horizontal guidance. The runway can also have area type navigation equipment with approved nonprecision instrument approach procedures.
- Visual visual approach—A runway that supports only visual approach procedures.
- Nonprecision instrument greater visibility—A runway with a nonprecision instrument approach procedure that allows for landing in visibility conditions greater than 200 ft. decision height.
- Nonprecision instrument approach low visibility—A runway with a nonprecision instrument approach procedure that allows for landing in low visibility conditions. Low visibility conditions include decision heights less than 200 ft.
- Precision instrument—A runway that uses an Instrument Landing System (ILS) or a Precision Approach Radar.
Copalis Beach State Airport
Landscape or Portrait: 8.5 x 11, 11 x 17, 22 x 34 or 34 x 44
Questions?

http://wsdot.maps.arcgis.com/home/index.html

Alan Smith
GIS Branch Manager
GIS and Roadway Data Office
WSDOT
smith@wsdot.wa.gov